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(56) Documents cited

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(58) Field of search

UK CL (Edition K) A5G GV

INT CL⁶ A61L

(54) Air freshener for motor vehicles

(57) An air freshener to be mounted adjacent an air vent of a motor vehicle passenger compartment, the air freshener having air freshening material capable of releasing one or more aromas, a support 2 for holding the air freshening material and having protrusions 4 to be placed in an air vent so as to mount the air freshener. The air freshener is preferably of triangular cross section having a front face without apertures to which a suitable surface design may be applied and on which one or more cut-out designs may be provided, arranged at one or more levels above the front face.

Fig 1(a)

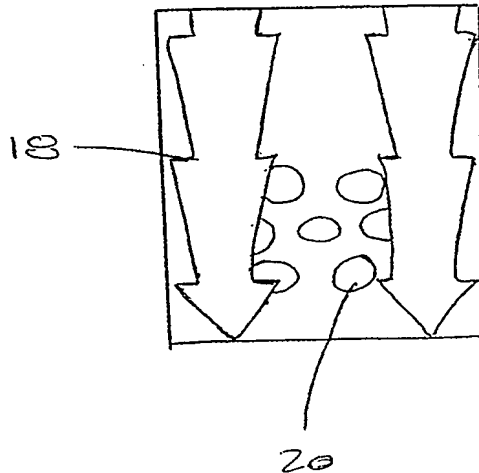
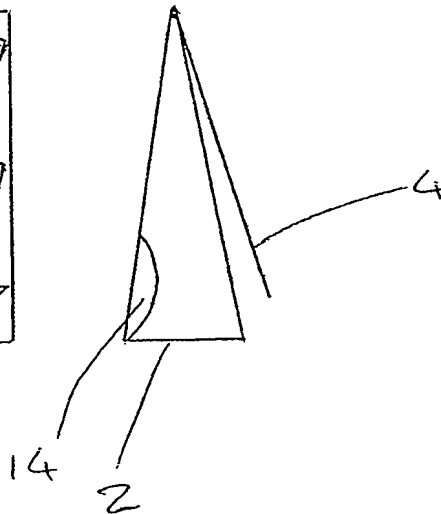


Fig 1(b)



At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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Fig 1(a)

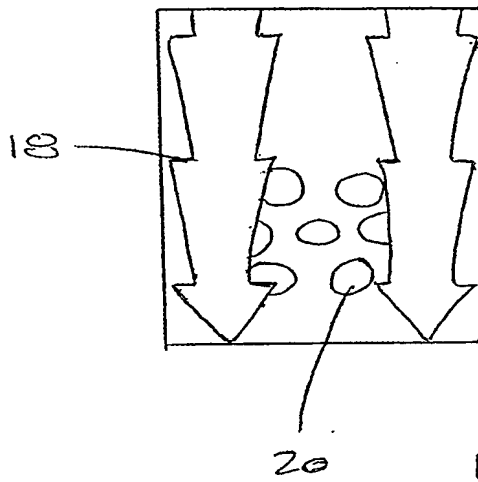
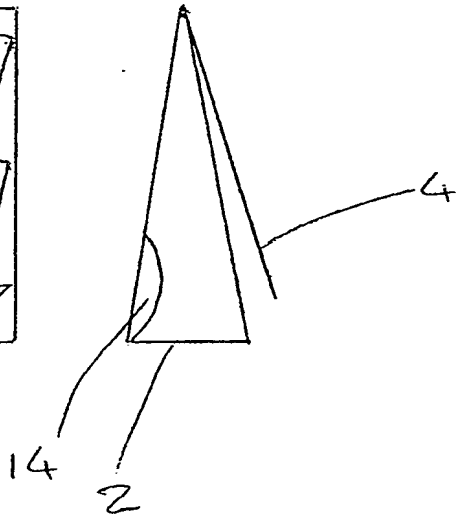


Fig 1(b)



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Fig 2.

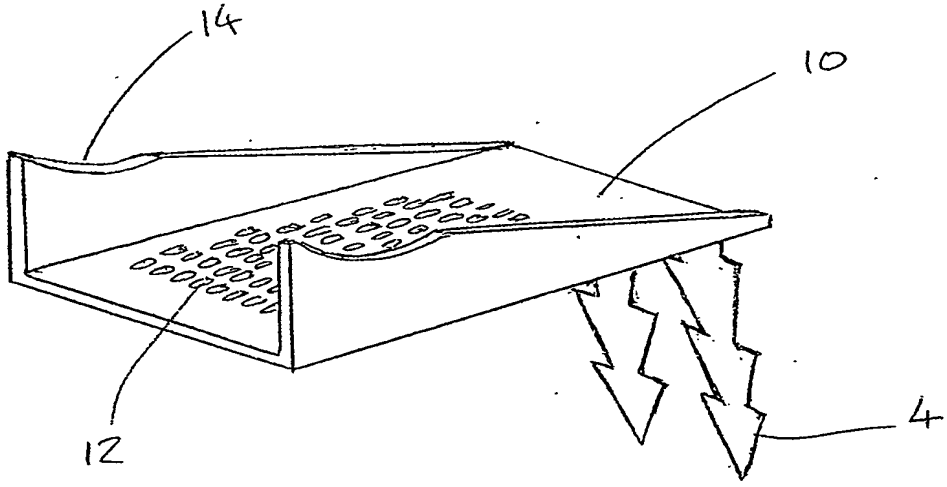
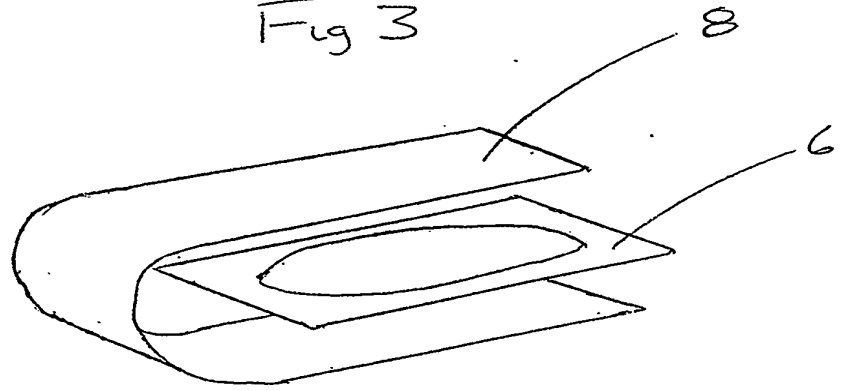
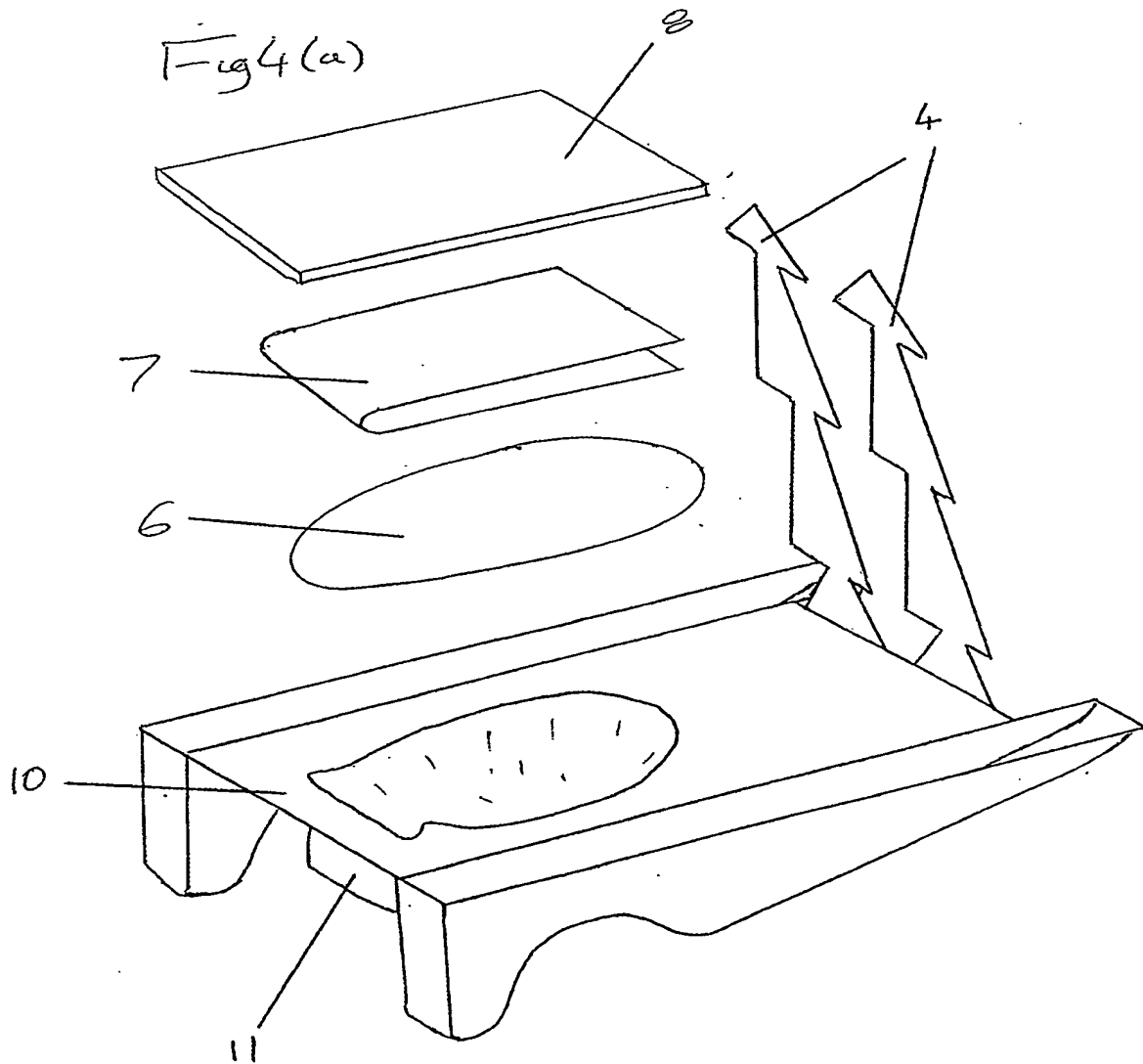


Fig 3

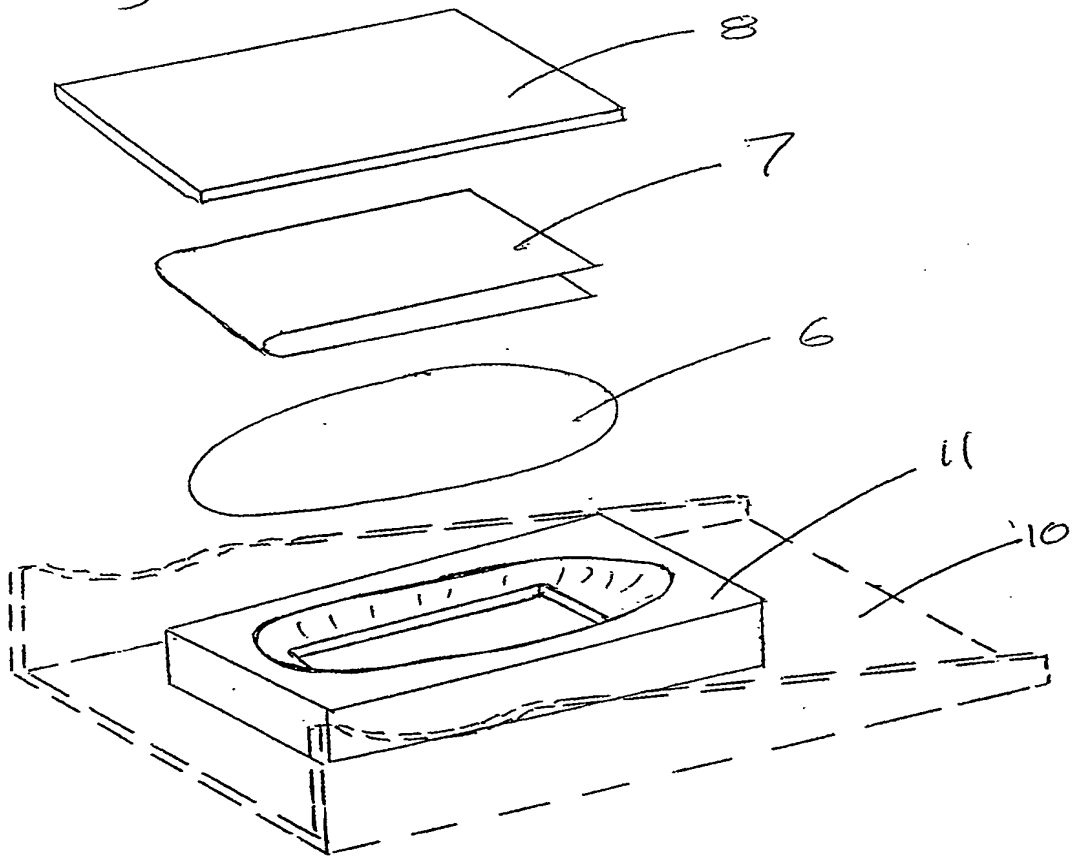


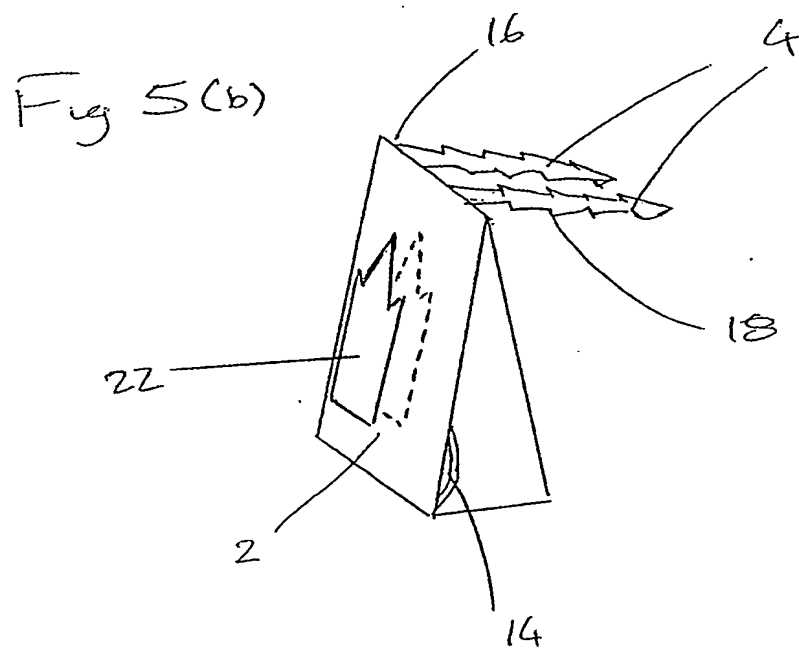
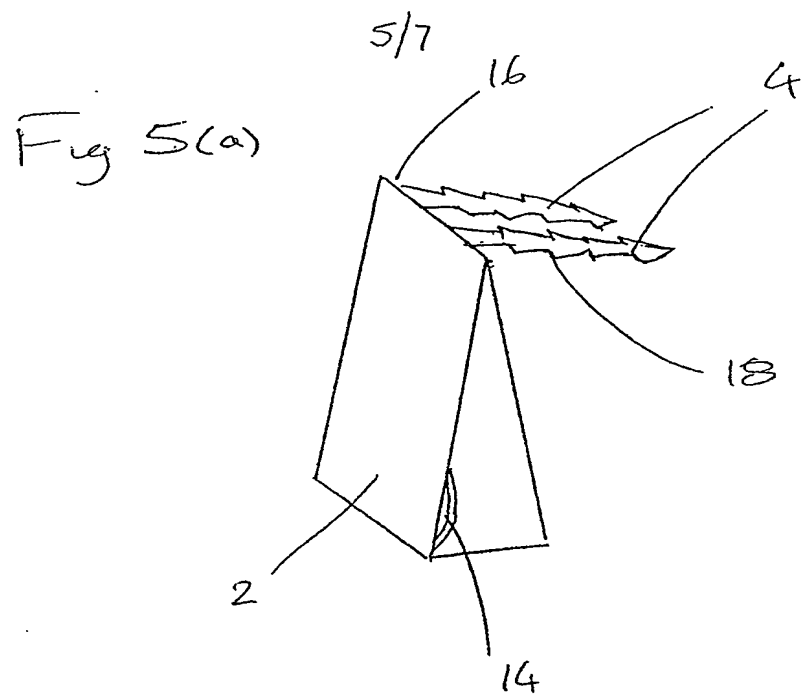
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Fig 4(b)





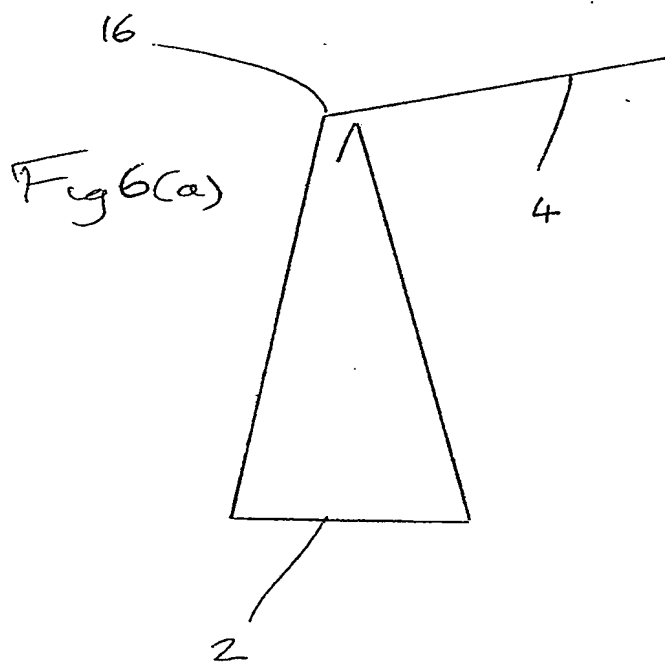
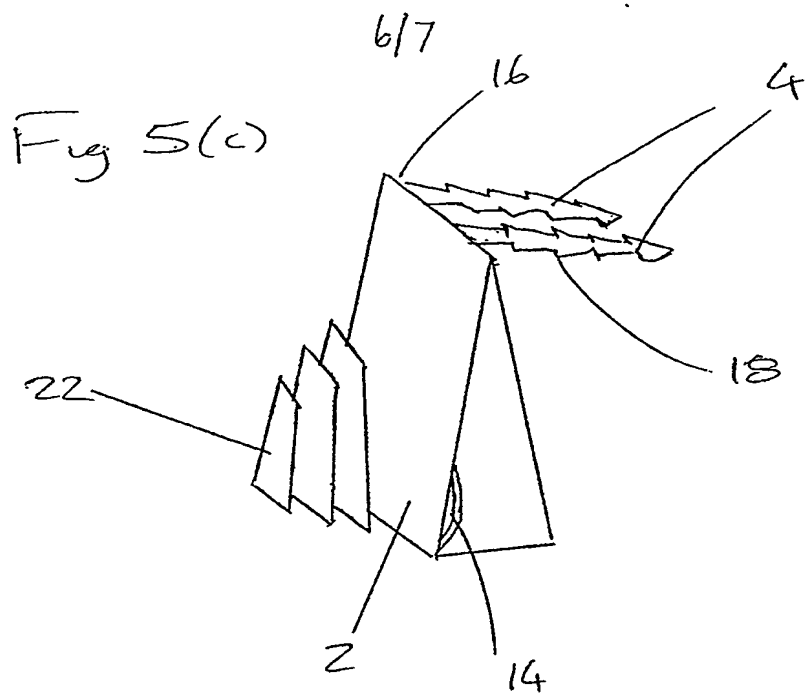


Fig 6(b)

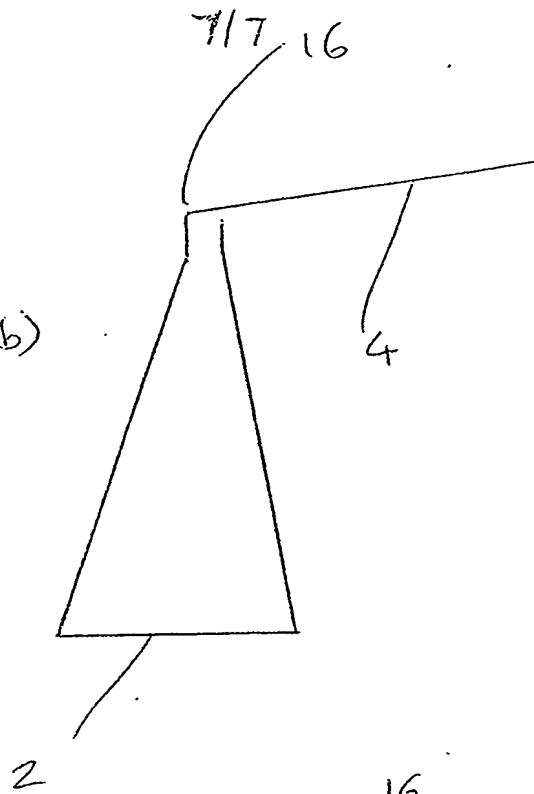
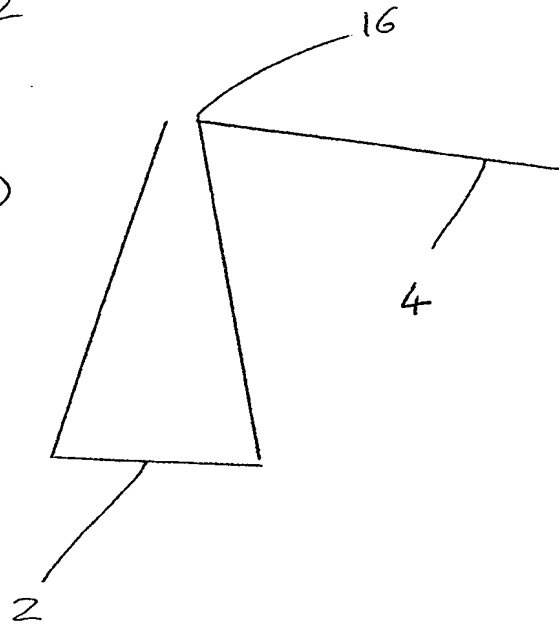


Fig 6(c)



AIR FRESHENER

The present invention relates to an air freshener
and more particularly to an air freshener for mounting in a
5 motor vehicle, such as a car, adjacent an air vent.

Previously, it has been known to use air fresheners
in the passenger compartment of motor vehicles. Commonly,
these have been mountable, for instance, on top of the
dashboard, but rely on air currents within the compartment to
10 circulate air past the freshener.

To overcome this problem, it is known to mount the
air freshener directly over the opening of an air vent in the
compartment. However, these previously known air fresheners
are of relatively complicated design and require special
15 fittings which mount the air freshener by clipping onto the
surrounding edges of a particular air vent.

A further disadvantage related to known air
fresheners is that the use of many perforations for allowing
air to access the interior of the freshener, detracts from the
20 aesthetic appeal of the freshener and restricts what designs
may be used on its outer surface.

Hence, it is an object of the present invention to
provide an improved air freshener of simple design such that it
may be easily located adjacent any motor vehicle air vent.

25 It is a further object of the present invention to
provide an air freshener having an outer surface on which many
different designs may be applied.

According to the present invention there is
provided an air freshener to be mounted adjacent an air vent of

a motor vehicle passenger compartment, said air freshener comprising:

air freshening material;

a support holding said air freshening material; and

5 at least one protrusion extending from a surface of said support such that, in use, said at least one protrusion is placed into an air vent so as to mount the air freshener, said support having at least one aperture for receiving air from the air vent.

10 Preferably, the support comprises a holder holding the air freshening material.

Preferably, the support comprises a sheet of material wrapped around said holder, said at least one protrusion extending from said holder through an aperture in
15 said sheet.

Alternatively, said support comprises a single sheet of material which is wrapped around said holder, said single sheet of material being longer than the outer periphery of said holder such that the additional length is formed into
20 said at least one protrusion.

According to the present invention there is also provided a method for mounting an air freshener adjacent an air vent of a motor vehicle passenger compartment, said method comprising the steps of: providing an outer support portion of
25 said air freshener with at least one protrusion and inserting the protrusion into the air vent to mount the air freshener thereto.

Preferably, the method further comprises the step of wrapping a single sheet of material around the outer support

portion such that said at least one protrusion extends through an aperture in said sheet.

Alternatively, the method further comprises the step of wrapping a single sheet of material around an air
5 freshening material such that at least one end of the sheet of material forms the protrusion.

Preferably the at least one protrusion is of suitable shape to grip cross members in the aperture of an air vent. Thus, for example, the at least one protrusion may be
10 barbed.

Preferably the support is of triangular cross-section.

Preferably a front face of the air freshener is without apertures, outflow of air being provided from one or
15 both sides of the air freshener. Hence, the front face of the air freshener is left free for any suitable surface designs.

Preferably the front face is provided with one or more cut-out designs which are arranged at one or more levels above the front face.

20 Preferably the air freshening material is capable of releasing one or more aromas which acts as a decongestant.

The invention will be more clearly understood from the following description given by way of example only, with reference to the accompanying drawings in which:

25 Figure 1(a) and (b) show rear and side views of a preferred air freshener according to the present invention;

Figure 2 shows schematically a plastic container for use in the air freshener of Figure 1 according to a first embodiment;

Figure 3 shows schematically the felt and blister form plastic pack for use with the air freshener of Figure 1;

Figures 4(a) and (b) show schematically felt and plastic pack assemblies for use with the first and second
5 embodiments respectively but equally applicable to either embodiment.

Figures 5(a), (b) and (c) show diagrammatically the air freshener of Figure 1 having respectively plain, single cut-out and/triple cut-out front faces;

10 Figure 6(a), (b) and (c) show three alternative ways of folding the outer casing and protrusions of the air freshener of Figure 1 according to a second embodiment.

The figures show an air freshener for use inside a motor vehicle passenger compartment. A support in the form of
15 a casing 2 is wrapped around an air freshening apparatus comprising air freshening material and protrusions 4 extend from the back of the air freshener. These protrusions 4 may then be inserted into the opening of an air vent, such as found in the dashboard of most motor vehicles.

20 Hence, air entering the passenger compartment via the air vent is directed against the air freshener and some passes through to pick up aromas/fragrances. The aromas may be of any type or combination such as those of particular plants and flowers and those which act as a decongestant, helping to
25 clear the throats and noses of the vehicle occupants. Further, it is contemplated to use aromas as part of "aroma therapy" and other medical treatments.

The air freshening apparatus itself preferably comprises a blister form plastic pack, e.g. a plastic sheeting

containing capsules of fragrance or a gelatine capsule. This plastic sheeting or capsule is preferably mounted adjacent felt or similar material, such that upon bursting a fragrance capsule when it is desired to use the air freshener, the liquid
5 contained therein is absorbed into the felt and then slowly diffuses into the air which passes through. However, other air freshening material may be used as convenient, for example a simple block of material may be attached to the support with a covering material for the block being at least partially
10 removed when preparing the air freshener for use.

In one embodiment, the plastic pack 6 and the felt 8 may be mounted together as illustrated in Figure 3 and placed within container 10 of Figure 2. Although other materials may be used, this container 10 is preferably made of plastic and
15 has a series of perforations 12 in a face to form the rear of the air freshener. The container may have an enclosing face opposite this rear face, but this is not necessary for the container to act as a simple support for the pack 6 and felt 8. Preferably it has triangular side portions which, as shown,
20 have cut-outs 14 to allow the air to pass out of the air freshener. As illustrated in Figure 2, container 10 forms part of a first embodiment of the present invention, in as much as the protrusions 4, to be described later, are formed as part of the container 10 and may be inserted through, for instance, a
25 piece of card which forms a case 2.

Preferably, the protrusions meet the container 10 at its edge so that they may be easily bent as shown in Figure 1(b). Alternatively, the container 10 may be shorter than the case 2 or be formed as illustrated in Figure 4(a) such that the

protrusions 4 extend from the back face of the case 2, below the edge.

In the preferred arrangements, as shown in Figures 4(a) and (b), the plastic pack 6 is a gelatine capsule which is supported in a member 11 which may be part of the container 10. Rather than the perforations shown in Figure 2, a single aperture may be used as shown in Figure 4(a) or no aperture at all as shown in Figure 4(b). In this latter case, the apparatus relies on other flow, for instance back out of apertures 20 or through gaps between container 10 and case 2. On top of the gelatine capsule 6 is then arranged a double layer of (blotting type) paper 7 and some felt 8, these two materials having different absorption and dispersion properties. Preferably, a pin may be supplied mounted to the case 2 (by adhesive or insertion through a suitable hole or holes) and this may be removed and used to burst the internal capsule 6.

The air freshening apparatus is easily placed within the support or case 2. This case may comprise a piece of card which is folded around the air freshening apparatus. It may be folded to fully enclose the container or stuck to the outer surface of the container 10 or, alternatively, merely joined at 16 to form a sleeve into which the container 10 may slide.

The case 2 has a front face, as illustrated in Figure 5(a), upon which any image or design may be printed or produced. Additionally, however, the case 2 may be provided with cut-out portions 22 which stand away from the front face. As shown in Figure 5(b) the cut-out is shaped and illustrated

as, for instance, a person or an object and forms the foreground, standing away from the back face which shows the background. Other visual effects may be created and, as illustrated in Figure 5(c) more than one level may be used.

5 The visual effect has particular impact when used with the air freshener embodiment described above due to the inclined front face of the case 2. This effect is further enhanced when the air freshener is supplied with its back face against and affixed to a larger flat backing card.

10 The particular way in which the cut-outs are supported is not essential but may be by way of folding one or more extensions of the cut-out behind itself and affixing it or them to the front face of the case 2 or, alternatively, by using an additional attached spacer.

15 According to a second embodiment of the present invention, at 16, part of the case 2, either from the front face or the back face, extends to form the protrusions 4. In this case the container 10 does not have protrusions.

The protrusions of either the first or second
20 embodiments are preferably provided with barbs and preferably, for storage, may be folded to lie against the back face, which is how the unit may ideally be sold. The case 2 may have small slots into which the ends of the protrusions may fit to hold them against the back face.

25 Commonly air vents are provided with members crossing their aperture and the protrusions 4 are designed such that the barbs 18 locate behind these cross-members to prevent the air freshener falling out of position. Alternatively, however, other shapes of protrusion may be used such a simple

hooks.

The rear face of the case is provided with perforations 20 through which air from the air vent may pass. However, other forms of aperture may be used instead.

5 Although a triangular cross-section air freshener has been described, the present invention may equally be applied to other cross-section air fresheners such as square and box shapes, indeed, only one protrusion or more than two protrusions may be used and they may be fixed to the back of
10 the air freshener rather than being an integral part of the case.

CLAIMS

1. An air freshener to be mounted adjacent an air vent of a motor vehicle passenger compartment, said air freshener
5 comprising:

air freshening material;
a support holding said air freshening material; and
at least one protrusion extending from a surface of
said support such that, in use, said at least one protrusion is
10 placed into an air vent so as to mount the air freshener, said
support having at least one aperture for receiving air from the
air vent.

2. An air freshener according to claim 1, wherein the support comprises a holder holding the air freshening material.

15 3. An air freshener according to claim 2, wherein the support comprises a sheet of material wrapped around said holder, said at least one protrusion extending from said holder through an aperture in said sheet.

4. An air freshener according to claim 3, wherein the
20 at least one protrusion is of suitable shape to grip cross members in the aperture of an air vent.

5. An air freshener according to claim 3 or 4, wherein the at least one protrusion is barbed.

6. An air freshener according to any preceding claim,
25 wherein the support is of triangular cross section.

7. An air freshener according to any preceding claim, wherein a front face of the air freshener is without apertures, outflow of air being provided from one or both sides of the air freshener.

8. An air freshener according to any preceding claim, wherein the front face is provided with one or more cut-out designs which are arranged at one or more levels above the front face.

5 9. An air freshener according to any preceding claim, wherein the air freshening material is capable of releasing one or more aromas which acts as a decongestant.

10 10. A method for mounting an air freshener adjacent an air vent of a motor vehicle passenger compartment, said method comprising the steps of: providing an outer support portion of said air freshener with at least one protrusion and inserting the protrusion into the air vent to mount the air freshener thereto.

15 11. An air freshener constructed and arranged substantially as hereinbefore described with reference to and as illustrated by Figs 1 to 5.

12. An air freshener constructed and arranged substantially as hereinbefore described with reference to and as illustrated by Figs 1 to 6.

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Patents Act 1977
Examiner's report to the Comptroller under
Section 17 (The Search Report)

Application number

9213450.1

Relevant Technical fields

(i) UK CI (Edition K) A5G GV

(ii) Int CI (Edition 5) A61L

Databases (see over)

(i) UK Patent Office

(ii)

Search Examiner

P N DAVEY

Date of Search

7 AUGUST 1992

Documents considered relevant following a search in respect of claims

1-12

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	GB 2251792 A (FRAGRANT AIR) See eg Figure 2	1-10
X	GB 2223171 A (JOURNAL) See eg page 1, lines 5-14	1-10
X	WO 91/007744 A1 (DELPHIC MANOR) See eg Figure 1	1-10
X	EP 0328702 A1 (SYNT) See eg column 3, lines 1-5	1-10
X	US 4813344 (GRIEF) See eg column 2, lines 45-51 and column 4, lines 42-53	1-10
X	US 4523870 (SPECTOR) See eg column 4, lines 6-11 and Figure 5	1-10
X	US 4306892 (TEC-AIR) See eg column 2, lines 52-65 and Figure 1	1-10

SF2(p)

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Category	Identity of document and relevant passages	Relevant to claim(s)

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